Section 16

DENTAL CARE WORKFORCE/ COST OF DENTAL CARE/ ACCESSIBILITY OF DENTAL CARE

Barriers that prevent many population groups in the United States from receiving optimum oral health care can be measured in several ways:

- Availability of dental health professionals and the ratio of dentists to population
- Costs for dental care and unmet need due to cost
- Dental insurance coverage

The lack of dental health professionals in many areas of the country prevents those living in underserved areas from obtaining optimum oral health care. The ratio of dentists to population by state ranges from 31.3 to 69.0 per 100,000 population (Dill et al., 2000). The District of Columbia has a higher ratio of dentists to population (94.9 per 100,000) than any state.

The cost of dental care may also interfere with people's ability to obtain dental services. Significant increases have been reported in total dental expenditures, per capita costs, and mean dental expenditures over the past several decades (CMS, 2001; Moeller & Levy, 1996; Manski et al., 1999; Cohen et al., 2000). Dental insurance coverage significantly increases a person's access to dental care. Those with private dental insurance were more likely to have seen a dentist in the past year. However, the National Association of Dental Plans estimated that 56% of the U.S. population had dental insurance in 1999 (NADP, 2000).

This section examines the following: dental and medical insurance coverage, trends in per capita costs and dental expenses, methods of payment for dental care, dental health professional shortage areas, dentists to population ratios, and minority representation among dentists and dental school graduates.

REFERENCE

Cohen JW, Machlin SR, Zuvekas SH, et al. Health Care Expenses in the United States, 1996. Rockville, MD: Agency for Healthcare Research and Quality, 2000; MEPS Research Findings 12. AHRQ Pub. No. 01-0009.

Dill M, Salsberg E, Wing P, et al. HRSA State Health Workforce Profiles. Rockville, MD: Bureau of Health Professions, National Center for Health Workforce Information & Analysis, Health Resources and Services Administration, DHHS, 2000.

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16.1 The percentage of the population with dental insurance compared to the percentage with medical insurance

The lack of dental insurance is a barrier to obtaining oral health care. It accounts in part for poorer oral health among those who live at or near the federal poverty level, lack health insurance, or lose their insurance at retirement (US DHHS, 2000). Having dental insurance significantly influences the use of dental services. Among persons with private dental insurance, 70.4% reported seeing a dentist in the past year compared to 50.8% of those without dental insurance (Bloom et al., 1992).

In 1997, 55.7% of the U.S. adult population had dental insurance (BRFSS, 1997). Dental coverage varies by race/ethnicity, education, and income. According to data from the 1989 National Health Interview Survey, among persons aged 2 years and older, non-Hispanic whites were more likely to have dental insurance than non-Hispanic blacks or Hispanics (Bloom et al., 1992). Dental insurance coverage was greater among those with higher incomes and more education (Bloom et al., 1992). Persons aged 65 years and older generally have the lowest level of dental insurance coverage, in part due to loss of employer-provided insurance at retirement.

SOURCE OF DATA

The analyses reported here are based on the 1997 Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention. The health insurance data shown were obtained in the core survey and thus come from all states. The dental insurance data come from the following 20 states and are thus not nationally representative: Alabama, California, Colorado, Florida, Idaho, Indiana, Maryland, Mississippi, Missouri, Montana, Nevada, New Jersey, New Mexico, New York, Ohio, Tennessee, Texas, Utah, Virginia, and West Virginia.

- **In the states where the question was asked, adults with dental insurance were more likely to:**
  - be younger than age 55 (Figure 16.1.1).
  - be non-Hispanic blacks (Figure 16.1.2).
  - have more education (Figure 16.1.2).
  - have a higher income level (Figure 16.1.3).
- **Comparisons to medical insurance**
  - Among the U.S. population, 86% of adults aged 18 and older had medical insurance in 1997 while 56% had dental insurance.
  - The percentage of the U.S. adult population with medical insurance coverage was greatest among the oldest age group and least among the youngest age group (Figure 16.1.1).
  - Non-Hispanic whites were most likely to have medical insurance. Hispanics were least likely to have either medical or dental insurance (Figure 16.1.2).
  - The percentage of persons with medical insurance was greater among those with higher incomes and more education (Figures 16.1.2 and 16.1.3).

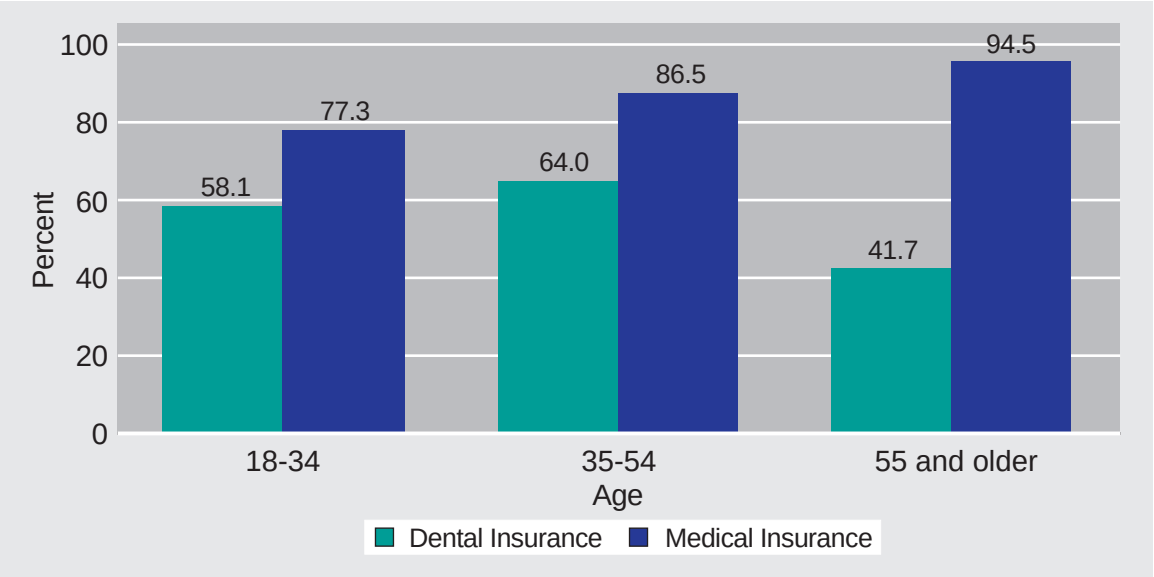
Bullets reference data that can be found in Table 16.1.1.

REFERENCES

Bloom B, Gift HC, Jack SS. Dental services and oral health: United States, 1989. Vital Health Stat 10 1992;183:1-95.

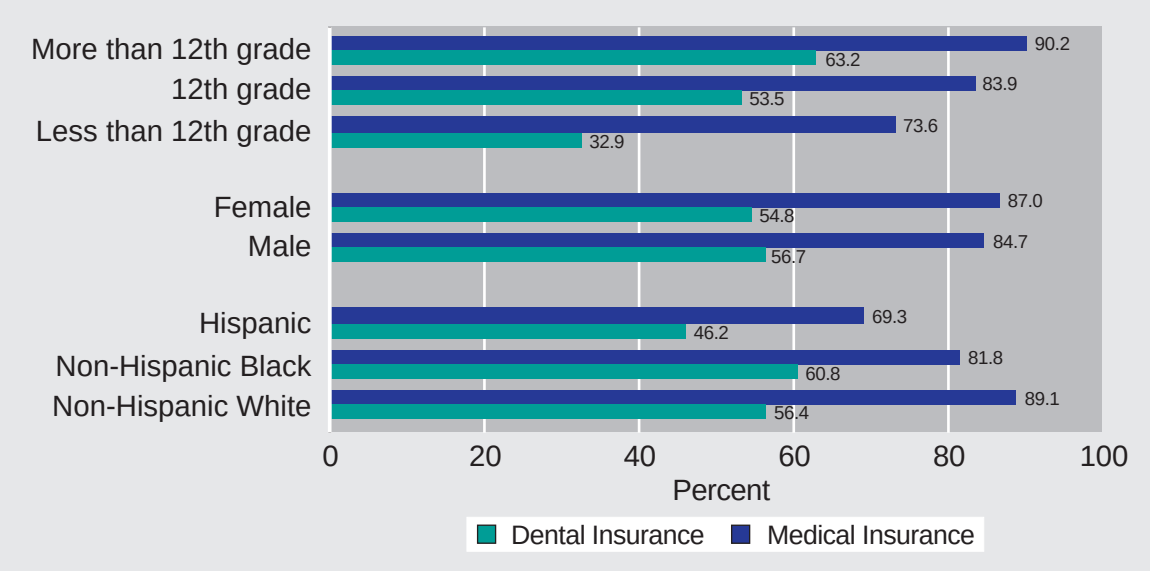
U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

Figure 16.1.1. Insurance coverage among adults aged 18 and older by age



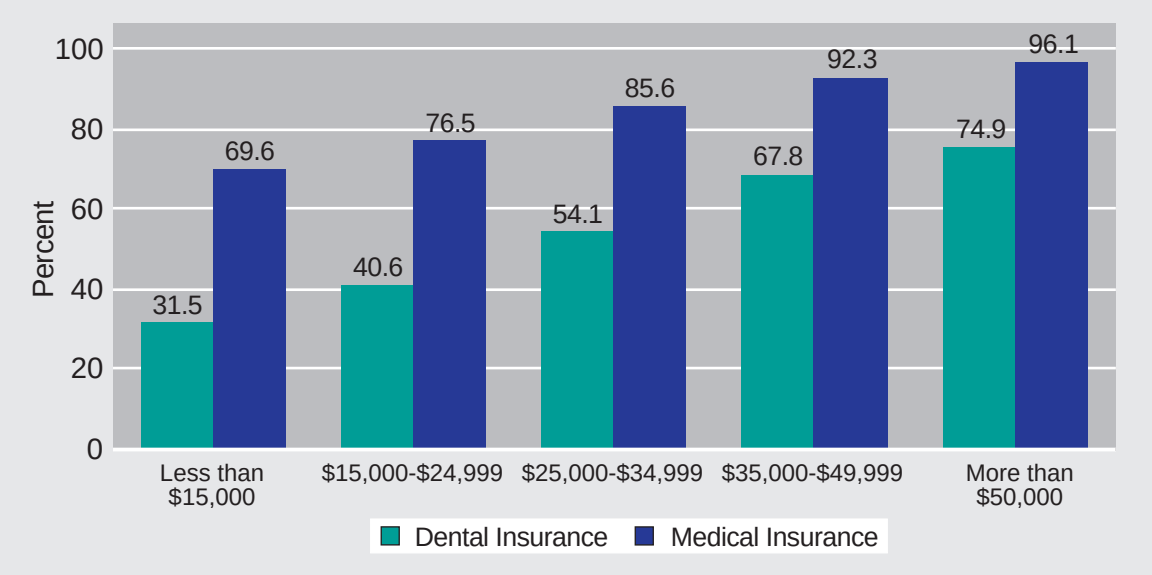
Data source: 1997 Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention.

Figure 16.1.2. Insurance coverage among adults aged 18 and older by selected demographic characteristics



Data source: 1997 Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention.

Figure 16.1.3. Insurance coverage among adults aged 18 and older by annual family income



Data source: 1997 Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention.

16.2 Trends in annual per capita costs for dental services and mean annual dental expense, by sources of payment

Annual per capita costs for dental services have risen substantially over the past four decades. The annual per capita costs for dental services among the total United States population was $10.50 in 1960, $22.20 in 1970, $57.80 in 1980, and $123.90 in 1990. By 1999, the annual per capita cost had risen to $201.80 (CMS, 2001). In the data presented below, no corrections were made for inflation. Recently, using data from the 1987 National Medical Expenditure Survey and the 1996 Medical Expenditure Survey, it was shown that real per patient dental expenses, adjusting for inflation, decreased between 1987 and 1996 (Brown et al., 2002; Wall et al., 2002).

In contrast, the mean annual dental expenses for only those persons with dental expenses have been much higher. These expenses were $137 in 1977, $295 in 1987, and $384 in 1996 (Moeller et al., 1996; Manski et al., 1999; Cohen et al., 2000).

SOURCE OF DATA

Analyses reported here are based on data from several sources. Annual per capita costs of dental services and source of payment were calculated from National Health Accounts (NHA) data produced by the Centers for Medicare and Medicaid Services (CMS) and population figures from the U.S. Census Bureau. Mean annual dental expense data were collected in the Medical Expenditure Panel Survey (MEPS) and its predecessor surveys, the 1977 National Medical Care Expenditure Survey (NMCES) and the 1987 National Medical Expenditure Survey (NMES).

Annual per capita costs by year and source of payment (Figure 16.2.1)

- Between 1960 and 1980, annual per capita costs for dental services paid out of pocket were substantially higher than costs paid by private insurance. Between 1980 and 1999, private dental insurance coverage increased, making the annual per capita costs for dental services paid out of pocket and by private insurance nearly equal.
- Although annual per capita costs for dental services paid by public funds rose slightly over the past four decades, they remained much lower than the annual per capita costs paid either out of pocket or by private insurance.

Mean annual dental expense by age and source of payment (Figures 16.2.2)

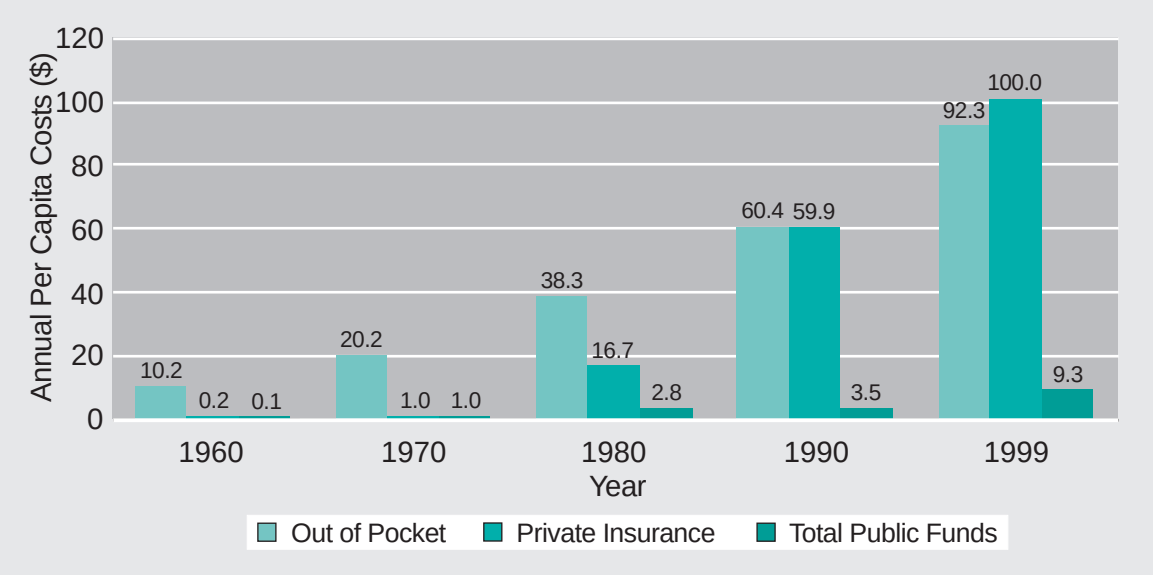
- Between 1977 and 1996, the mean annual dental care expense was consistently lower for those under 6 and aged 19 to 44 than for other age categories.
- For all age groups, the mean annual dental expense paid through private insurance was much higher in 1996 than in 1977.
- For those aged 19 and older, the mean annual dental expense paid out of pocket was higher in 1996 than in 1977.

Mean annual dental expense by race/ethnicity and source of payment (Figure 16.2.3)

- For all race/ethnicity groups, the mean annual dental expense paid through private insurance rose substantially between 1977 and 1996.
- The mean annual dental expense paid by Medicaid was higher for non-Hispanic blacks and Hispanics than for the non-Hispanic whites/other group[1] between 1977 and 1996.

[1] The 1977 NMCES and the 1987 NMES reported race/ethnicity as white (including all other race/ethnicity groups not shown), black, and Hispanic. The 1996 MEPS reported race/ethnicity as Hispanic, black-not Hispanic, and other (including non-Hispanic whites).

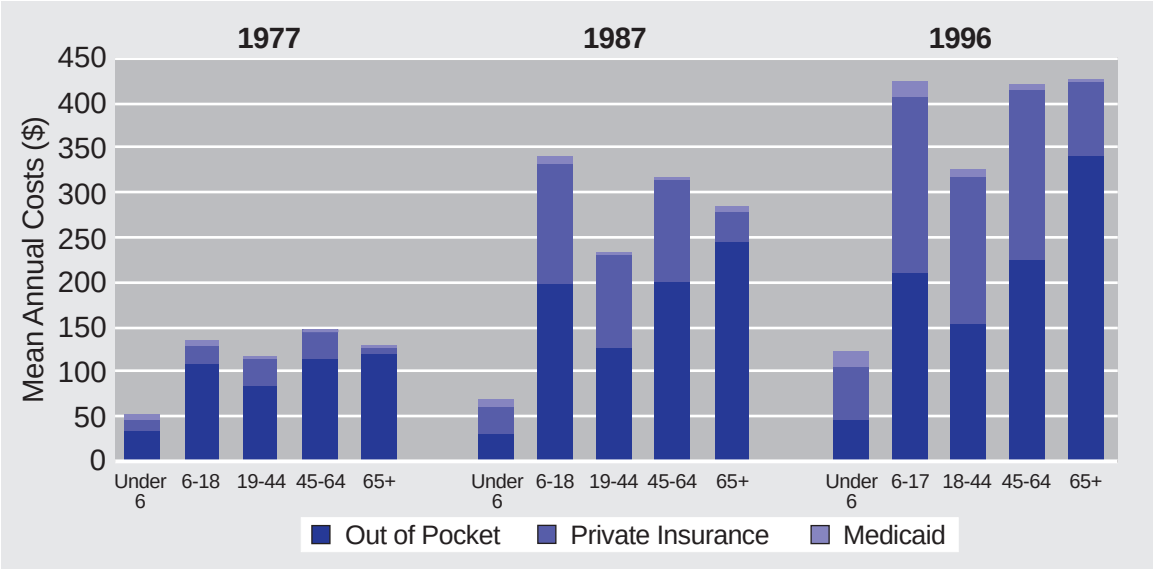
Figure 16.2.1. Trends in annual per capita costs for dental services by year and source of payment, 1960-1999



Notes: (1) Dental services include services provided in establishments operated by a doctor of dental medicine (D.M.D.) or doctor of dental surgery (D.D.S.) or doctor of dental science (D.D.Sc.). These establishments are classified as NAICS 6213 Offices of Dentists or SIC 802-Offices and clinics of dentists; (2) private insurance includes other private revenues including philanthropy; (3) per capita cost calculations based on total population, including those with and without dental expense.

Data source: Centers for Medicare and Medicaid Services, Office of the Actuary: National Health Statistics Group and U.S. Census Bureau, 2001, National Health Accounts.

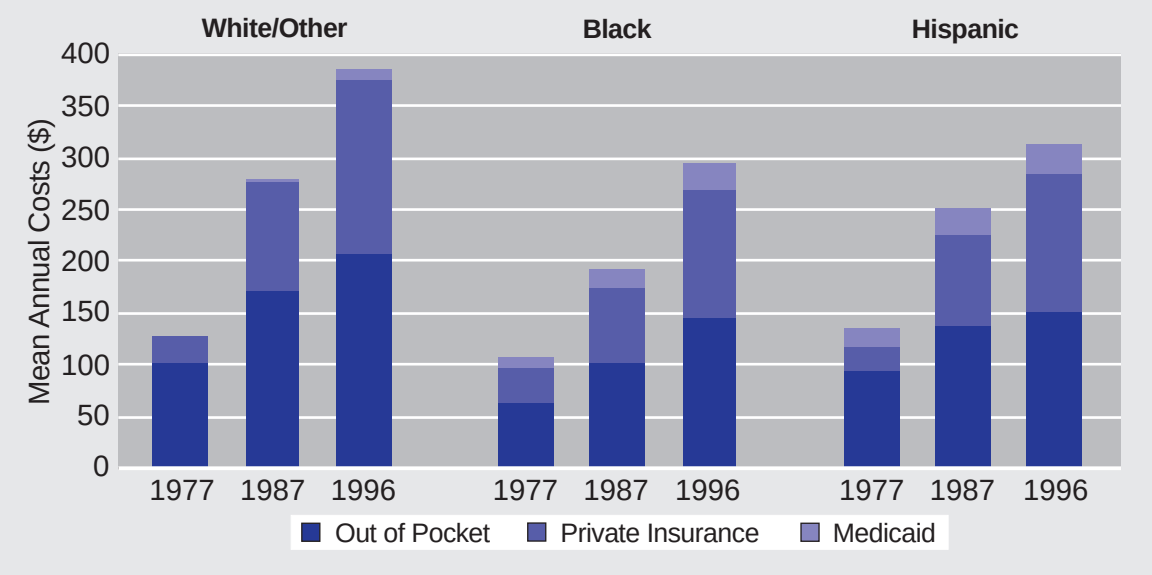
Figure 16.2.2. Mean annual dental care expense by age group and source of payment, 1977, 1987, and 1996



Note: Mean annual dental expense was calculated only among those with dental expenses. For further definitions, see Table 16.2.2-16.2.4 footnotes.

Sources: Moeller J, Levy H. Dental services: a comparison of use, expenditures, and sources of payment, 1977 and 1987. Rockville, MD: Agency for Healthcare Research and Quality, 1996; AHCPR Pub. No. 96-0005. National Medical Expenditure Survey Research Findings 26; Manski RJ, Moeller JC, Maas WR. Dental Services: use, expenditures and sources of payment, 1987. J Am Dent Assoc 1999; 130(4):500-8. Copyright © 1999 American Dental Association. Adapted 2002 with permission of ADA Publishing, a Division of ADA Business Enterprises, Inc.; and Medical Expenditure Panel Survey Household Component, 1996, Agency for Healthcare Research and Quality.

Figure 16.2.3. Mean annual dental care expense by race/ethnicity and source of payment, 1977, 1987, and 1996



Note: (1) Mean annual dental expenditure was calculated only among those with dental expenses. (2) The 1977 NMCES and the 1987 NMES reported race/ethnicity as white (including all other race/ethnicity groups not shown), black, and Hispanic. The 1996 MEPS reported race/ethnicity as Hispanic, black-not Hispanic, and other (including non-Hispanic whites). (3) For further definitions, see Table 16.2.2-16.2.4 footnotes.

Sources: Moeller J, Levy H. Dental services: a comparison of use, expenditures, and sources of payment, 1977 and 1987. Rockville, MD: Agency for Healthcare Research and Quality, 1996; AHCPR Pub. No. 96-0005. National Medical Expenditure Survey Research Findings 26; Manski RJ, Moeller JC, Maas WR. Dental Services: use, expenditures and sources of payment, 1987. J Am Dent Assoc 1999; 130(4):500-8. Copyright © 1999 American Dental Association. Adapted 2002 with permission of ADA Publishing, a Division of ADA Business Enterprises, Inc.; and Medical Expenditure Panel Survey Household Component, 1996, Agency for Healthcare Research and Quality.

- The mean annual dental expense paid out of pocket was higher for the non-Hispanic white/other race/ethnicity group than for non-Hispanic blacks or Hispanics between 1977 and 1996.

Mean annual dental expense by federal poverty level and source of payment (Figure 16.2.4)

- The mean annual dental expense paid through private insurance generally rose between 1977 and 1996.
- By 1996, the mean annual dental expense paid by Medicaid rose considerably, particularly among those below the federal poverty line.

Bullets reference data that can be found in Tables 16.2.1, 16.2.2, 16.2.3, and 16.2.4.

REFERENCES

Brown LJ, Wall TP, Manski RJ. The funding of dental services among U.S. adults aged 18 years and older: recent trends in expenditures and sources of funding. J Am Dent Assoc 2002;133:627-35.

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Cohen JW, Machlin SR, Zuvekas SH, et al. Health Care Expenses in the United States, 1996. Rockville, MD: Agency for Healthcare Research and Quality, 2000; MEPS Research Findings 12. AHRQ Pub. No. 01-0009.

Manski RJ, Moeller JF, Maas WR. Dental services: use, expenditures and sources of payment, 1987. J Am Dent Assoc 1999;130(4):500-8.

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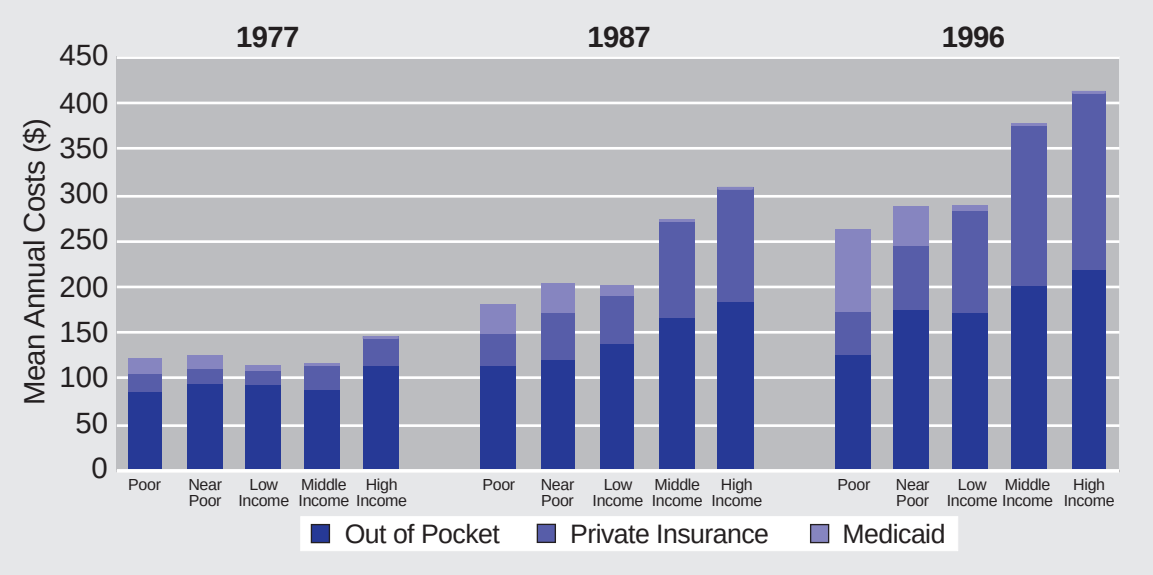
Wall TP, Brown LJ, Manski RJ. The funding of dental services among U.S. children 2 to 17 years old: recent trends in expenditures and sources of funding. J Am Dent Assoc 2002;133:474-482.

Figure 16.2.4. Mean annual dental care expense by source of payment and federal poverty level, 1977, 1987, and 1996



Notes: (1) Mean annual dental expense was calculated only among those with dental expenses. (2) Poverty level for 1977 and 1987—Poor: incomes below the federal poverty line; near poor: between the federal poverty line and 125% of the federal poverty line; low income: over 125% to 200% of the federal poverty line; middle income: over 200% to 400% of the federal poverty line; and high income: over 400% of the federal poverty line. Poverty levels for 1996—Poor: incomes below the federal poverty line; near-poor: between the federal poverty line and 124% of the federal poverty line; low income: 125% to 199% of the federal poverty line; middle income: 200% to 399% of the federal poverty line; and high income: 400% of the federal poverty line and above. (3) For further definitions, see Table 16.2.2-16.2.4 footnotes.

Sources: Moeller J, Levy H. Dental services: a comparison of use, expenditures, and sources of payment, 1977 and 1987. Rockville, MD: Agency for Healthcare Research and Quality, 1996; AHCPR Pub. No. 96-0005. National Medical Expenditure Survey Research Findings 26; and Medical Expenditure Panel Survey Household Component, 1996, Agency for Healthcare Research and Quality.

16.3 Trends in the proportion of dental care paid for by public programs, private insurance, and out of pocket

Trends in payment for dental care services over the past four decades show a dramatic shift from almost exclusive out of pocket payment in 1960 to a nearly even balance between out of pocket payments and private health insurance in 1999. Annual out-of-pocket payments for dental services steadily decreased from 97.2% in 1960 to 45.8% in 1999, while the proportion of annual costs for dental services paid by private insurance steadily increased from only 1.9% in 1960 to almost 50% in 1999 (CMS, 2001).

These trends are confirmed by corresponding data from other sources. Between 1977 and 1996, the proportion of total annual dental expense paid out of pocket decreased from 72% in 1977 to 55.6% in 1987 to 51.5% in 1996. The proportion reimbursed by private insurers increased from 18.1% in 1977 to 34.4 % in 1987 to 42.5% in 1996. Public sources of payment for annual dental expenses, including Medicare, Medicaid, or other public funds, represent approximately 10% in both 1977 and 1987 and less than 4% in 1996 (Moeller et al., 1996; Manski et al., 1999; Cohen et al., 2000. Based on data from 1977 National Medical Care Expenditure Survey, 1987 National Medical Expenditure Survey, and the 1996 Medical Expenditure Panel Survey).

SOURCE OF DATA

Analyses reported here were based on data from the National Health Accounts, produced by the Centers for Medicare and Medicaid Services (CMS) and from the series of medical expenditure surveys conducted by the Agency for Healthcare Research and Quality: the 1977 National Medical Care Expenditure Survey (NMCES), the 1987 National Medical Expenditure Survey (NMES), and the 1996 Medical Expenditure Panel Survey (MEPS).

Annual costs for dental services by source of payment (Figure 16.3.1)

- The percentage of annual cost for dental services paid out of pocket steadily decreased from 1960 to 1999, while the proportion of dental services paid by private insurance steadily increased.
- Less than 5% of the annual costs for dental services have been covered by public funds, with the majority of these services covered under Medicaid (CMS, 2001). Medicaid covers mainly children below state-specific poverty thresholds. Older age groups may not be eligible or may need to meet more rigid eligibility criteria depending on the state.

Source of payment for annual dental expenses by age (Figure 16.3.2)

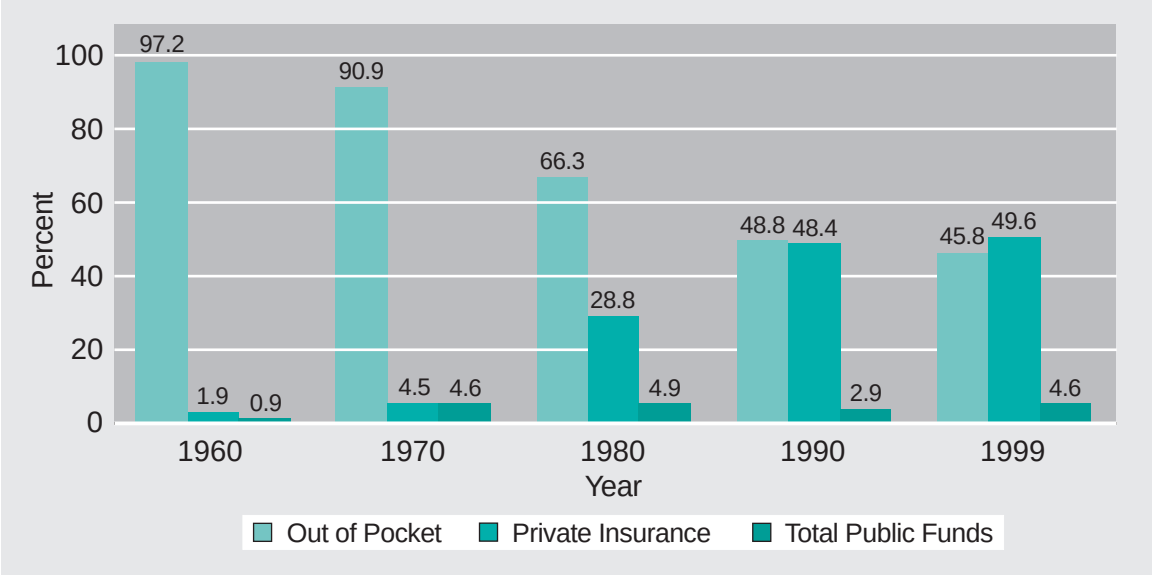
- Between 1977 and 1996, those age 65 and older paid proportionately more of their annual dental expenses out of pocket and less was paid for by private insurance than for any other age group.
- Medicaid paid a higher percentage of annual dental expenses for those under age 6 than for any other age group.

Differences by race/ethnicity (Figure 16.3.3)

- Medicaid paid a higher percentage of annual dental care expenses for blacks and Hispanics than for the white/other race/ethnicity group.[2]

[2] The 1977 NMCES and the 1987 NMES reported race/ethnicity as white (including all other race/ethnicity groups not shown separately), black, and Hispanic. The 1996 MEPS reported race/ethnicity as Hispanic, black-not Hispanic, and other (including non-Hispanic whites).

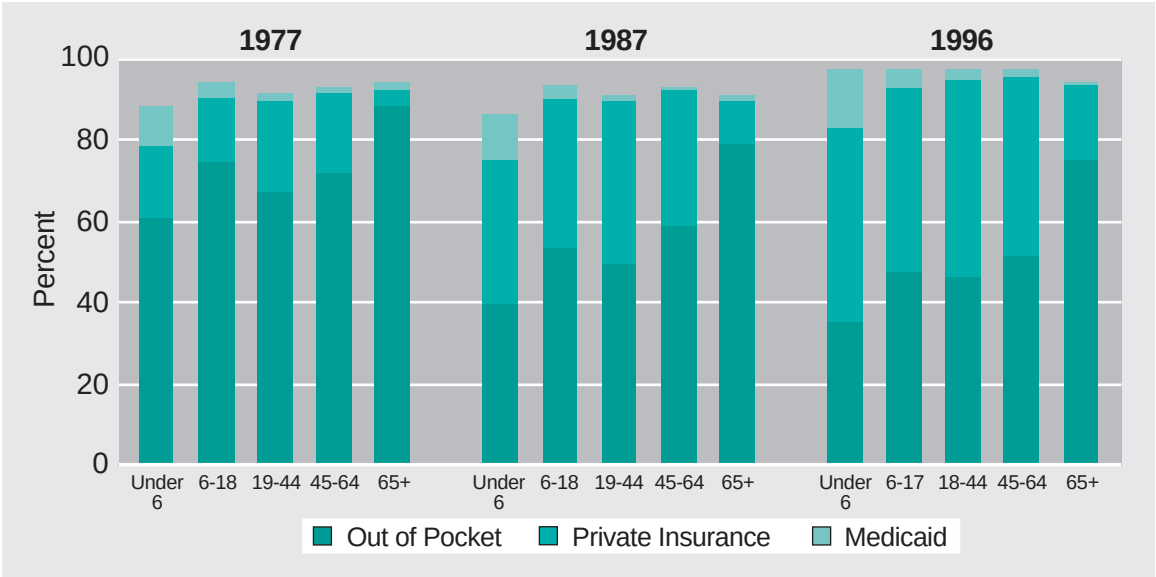
Figure 16.3.1. Trends in annual payment for dental services by year and source of payment, 1960-1999



Notes: (1) Dental services include services provided in establishments operated by a doctor of dental medicine (D.M.D.) or doctor of dental surgery (D.D.S.) or doctor of dental science (D.D.Sc.). These establishments are classified as NAICS 6213 Offices of Dentists or SIC 802-Offices and clinics of dentists. (2) Private insurance includes other private revenues including philanthropy.

Source: Centers for Medicare and Medicaid Services, Office of the Actuary: National Health Statistics Group National Health Accounts.

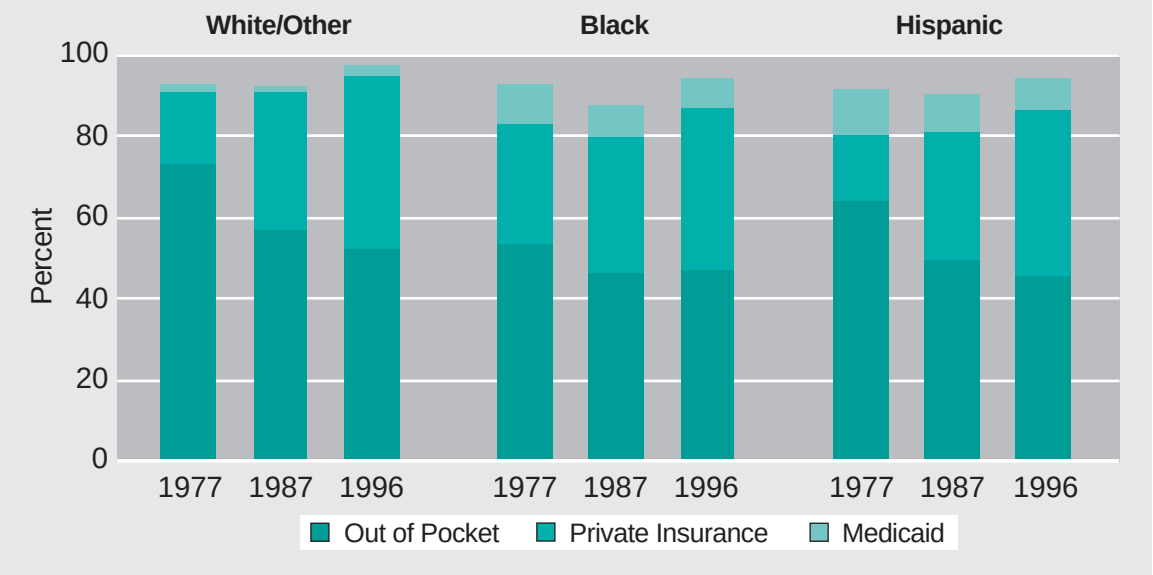
Figure 16.3.2. Trends in annual payment for dental services by age and source of payment, 1977, 1987, and 1996



Notes: Expenses from any type of dental care provider are included. Private insurance includes CHAMPUS and CHAMPVA (Armed Forces related coverage) in 1996.

Sources: Moeller J, Levy H. Dental services: comparison of use, expenditures, and sources of payment, 1977 and 1987. Rockville, MD: Agency for Healthcare Research and Quality, 1996; AHCPR Pub. No. 96-0005. National Medical Expenditure Survey Research Findings 26; and Cohen JW, Machlin SR, Zuvekas SH, et al. Health care expenses in the United States, 1996. Rockville, MD: Agency for Healthcare Research and Quality, 2000; MEPS Research Findings 12. AHRQ Pub. No. 01-0009.

Figure 16.3.3. Trends in annual payment for dental services by race/ethnicity and source of payment, 1977, 1987, and 1996



Notes: (1) Expenses from any type of dental care provider are included. (2) Private insurance includes CHAMPUS and CHAMPVA (Armed Forces related coverage) in 1996. (3) 1977 NMCES and 1987 NMES reported race/ethnicity as whites (including all other race/ethnicity groups not shown separately), black, and Hispanic. 1996 MEPS reported race/ethnicity as Hispanic, black-not Hispanic, and other (including non-Hispanic whites).

Sources: Moeller J, Levy H. Dental services: a comparison of use, expenditures, and sources of payment, 1977 and 1987. Rockville, MD: Agency for Healthcare Research and Quality, 1996; AHCPR Pub. No. 96-0005. National Medical Expenditure Survey Research Findings 26; and Cohen JW, Machlin SR, Zuvekas SH, et al. Health care expenses in the United States, 1996. Rockville, MD: Agency for Healthcare Research and Quality, 2000; MEPS Research Findings 12. AHRQ Pub. No. 01-0009.

- Between 1977 and 1996, a higher percentage of annual dental care expenses was paid out of pocket among the white/other race/ethnicity group than by blacks or Hispanics.

Differences by federal poverty level (Figure 16.3.4)

- Between 1977 and 1996, the proportion of annual dental expenses paid out of pocket decreased for all income groups.
- The proportion of annual dental care expenses covered by Medicaid for those at or below the federal poverty level (poor) doubled between 1987 and 1996.

Bullets reference data that can be found in Tables 16.3.1, 16.3.2, 16.3.3, and 16.3.4.

REFERENCES

Cohen JW, Machlin SR, Zuvekas SH, et al. Health care expenses in the United States, 1996. Rockville, MD: Agency for Healthcare Research and Quality, 2000; MEPS Research Findings 12. AHRQ Pub. No. 01-0009.

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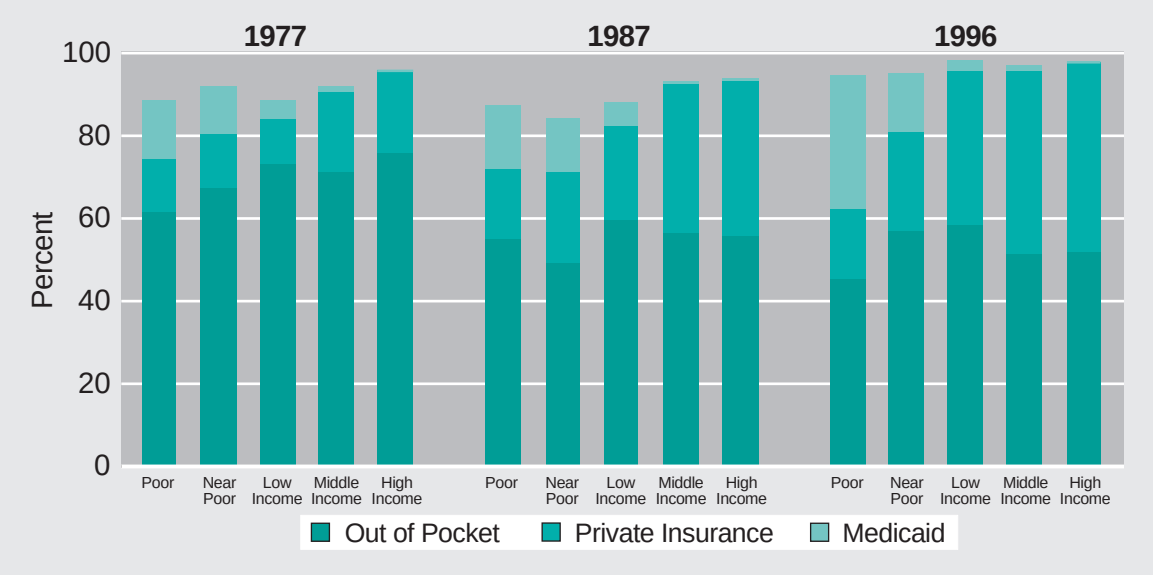
Moeller J, Levy H. Dental services: a comparison of use, expenditures, and sources of payment, 1977 and 1987. Rockville, MD: Agency for Healthcare Research and Quality, 1996; AHCPR Pub. No. 96-0005. National Medical Expenditure Survey Research Findings 26.

Figure 16.3.4. Trends in annual payment for dental services by federal poverty level and source of payment, 1977, 1987, and 1996



Notes: (1) Expenses from any type of dental care provider are included. Private insurance includes CHAMPUS and CHAMPVA (Armed Forces related coverage) in 1996. (2) For 1977 and 1987, poor refers to incomes below the federal poverty line; near poor, between the federal poverty line and 125% of the federal poverty line; low income, over 125% to 200% of the federal poverty line; middle income, over 200% to 400% of the federal poverty line; and high income, over 400% of the federal poverty line. For 1996, poor refers to incomes at or below the federal poverty line; near-poor, over the federal poverty line through 125% of the federal poverty line; low income, over 125% through 200% of the federal poverty line; middle income, over 200% to 400% of the federal poverty line; and high income, over 400% of the federal poverty line.

Sources: Moeller J, Levy H. Dental services: a comparison of use, expenditures, and sources of payment, 1977 and 1987. Rockville, Maryland: Agency for Healthcare Research and Quality, 1996; AHCPR Pub. No. 96-0005. National Medical Expenditure Survey Research Findings 26; and Cohen JW, Machlin SR, Zuvekas SH, et al. Health care expenses in the United States, 1996. Rockville, MD: Agency for Healthcare Research and Quality, 2000; MEPS Research Findings 12. AHRQ Pub. No. 01-0009.

16.4 Percentage of the population residing in dental health professional shortage areas

The Health Resources and Services Administration's (HRSA) Bureau of Primary Health Care (BPHC) designates and maintains a list of geographic areas with a shortage of dental, primary medical care and mental health practitioners. To be listed as a dental professional geographic shortage area the following criteria must be met:

1) the area has to be a rational area for the delivery of dental services,

2) either the area has to have a population to full-time equivalent dentist ratio of at least 5,000:1 or the area has to have a population to full-time equivalent dentist ratio of less than 5,000:1 but greater than 4,000:1 and have unusually high needs for dental services with insufficient capacity from existing dental providers, and

3) dental professionals in contiguous areas have to be overutilized, excessively distant, or inaccessible to the population under consideration.

The list is reviewed annually, but emphasis is placed on updating those designations that are more than 3 years old or where significant changes relevant to the designation criteria have occurred.

SOURCE OF DATA

The analyses reported here are based on the Health Professional Shortage Area report (2001) for dental professionals from the Health Resources and Services Administration's Bureau of Primary Health Care.

- The states with the highest percentage of their population designated as being underserved by a dental professional were Wyoming (100%), Michigan (89%), Indiana (88%), Alabama (87%), Iowa (87%), Missouri (86%), Alaska (85%), Nevada (84%), Wisconsin (84%), Illinois (80%), and South Dakota (80%).
- The states with the lowest percentage of their population designated as being underserved by a dental professional were the District of Columbia (33%), West Virginia (45%), California (47%), and Oklahoma (49%).

Bullets reference data that can be found in Table 16.4.1.

REFERENCE

Health Resources and Services Administration. Selected statistics on health professional shortage areas. Rockville, MD: Bureau of Primary Health Care, 2001.

16.5 Ratio of dentists to population and ratio of physicians to population

The distribution of dentists within the population is an important factor in assessing how well the dental profession is meeting the current needs of the public. A complete assessment should also include both the need and demand for services, third-party programs, and related issues (Waldman, 1998). The data needed to conduct this type of assessment are not available and, consequently, most estimates still rely on dentists to population ratios.

SOURCES OF DATA

Analyses reported here are based on the Health Resources and Services Administration (HRSA) Bureau of Health Professions' report on State Health Workforce Profiles, National Center for Health Workforce Information and Analysis (2000), and the annual report Distribution of Dentists in the United States published by the American Dental Association (ADA, 2000).

Figure 16.5.1 displays the ratios of practitioners per 100,000 population for dentists, primary care physicians, and all patient care physicians using data from HRSA. General findings include the following:

- The District of Columbia had the highest dentists to population ratio at 94.9 per 100,000.
- Excluding the District of Columbia, the dentists to population ratio by state ranged from 31.3 to 69 per 100,000.
- The four states with the highest dentists to population ratio were New York, New Jersey, Connecticut, and Hawaii.
- The four states with the lowest dentists to population ratio were Mississippi, New Mexico, Nevada, and North Carolina.
- In general, there were fewer dentists than physicians per 100,000 population, except in Idaho, Iowa, Michigan, New Jersey, and Vermont, where the ratios of dentists and physicians to population were similar.

A comparison of HRSA estimates of the number of dentists with the ADA estimates of professionally active dentists and with the ADA estimates of private practice dentists is shown per state in Figure 16.5.2.

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Figure 16.5.1. Number of dentists and physicians per 100,000 population in 1998 by state

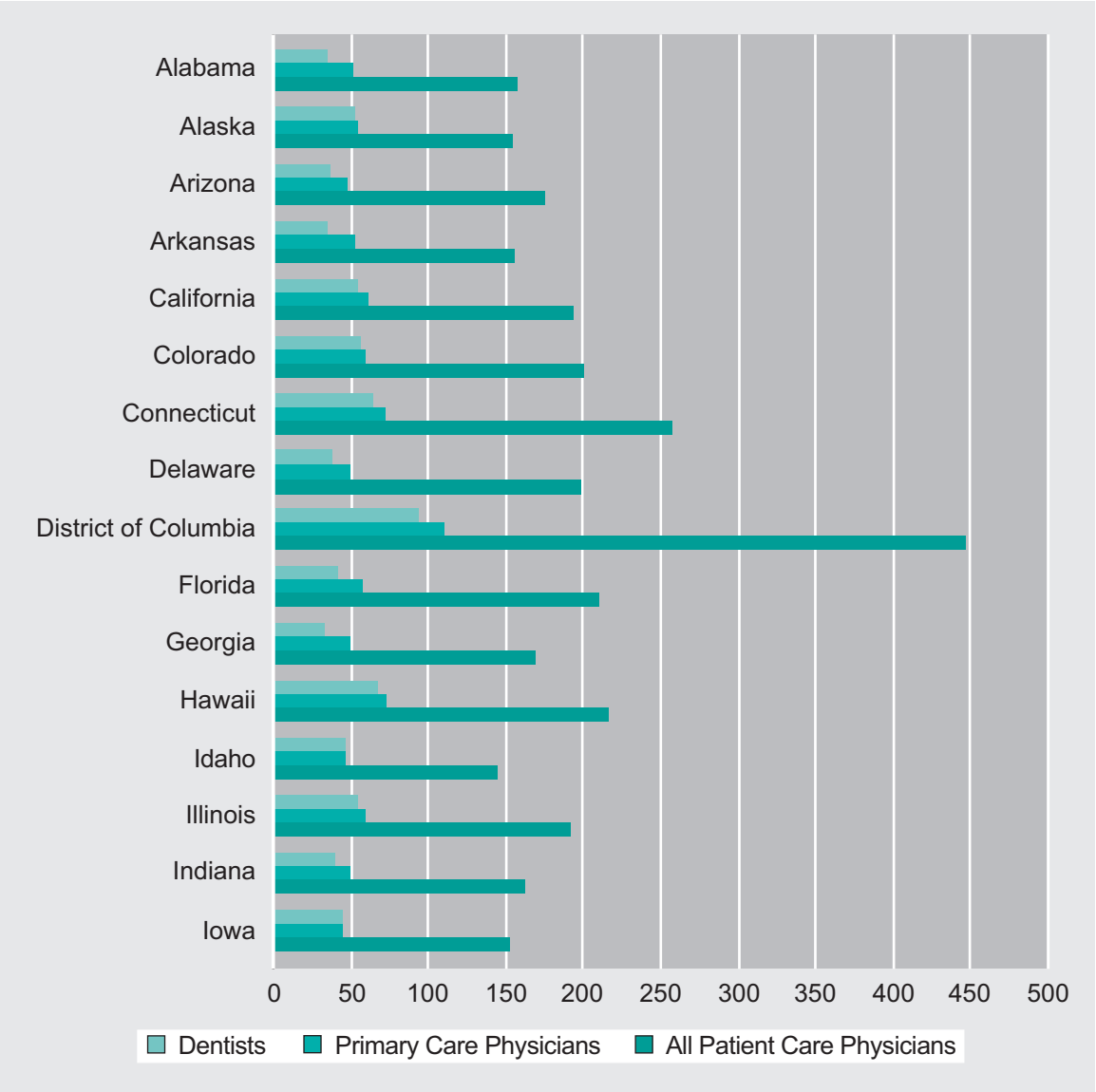


Figure 16.5.1. Number of dentists and physicians per 100,000 population in 1998 by state (continued)

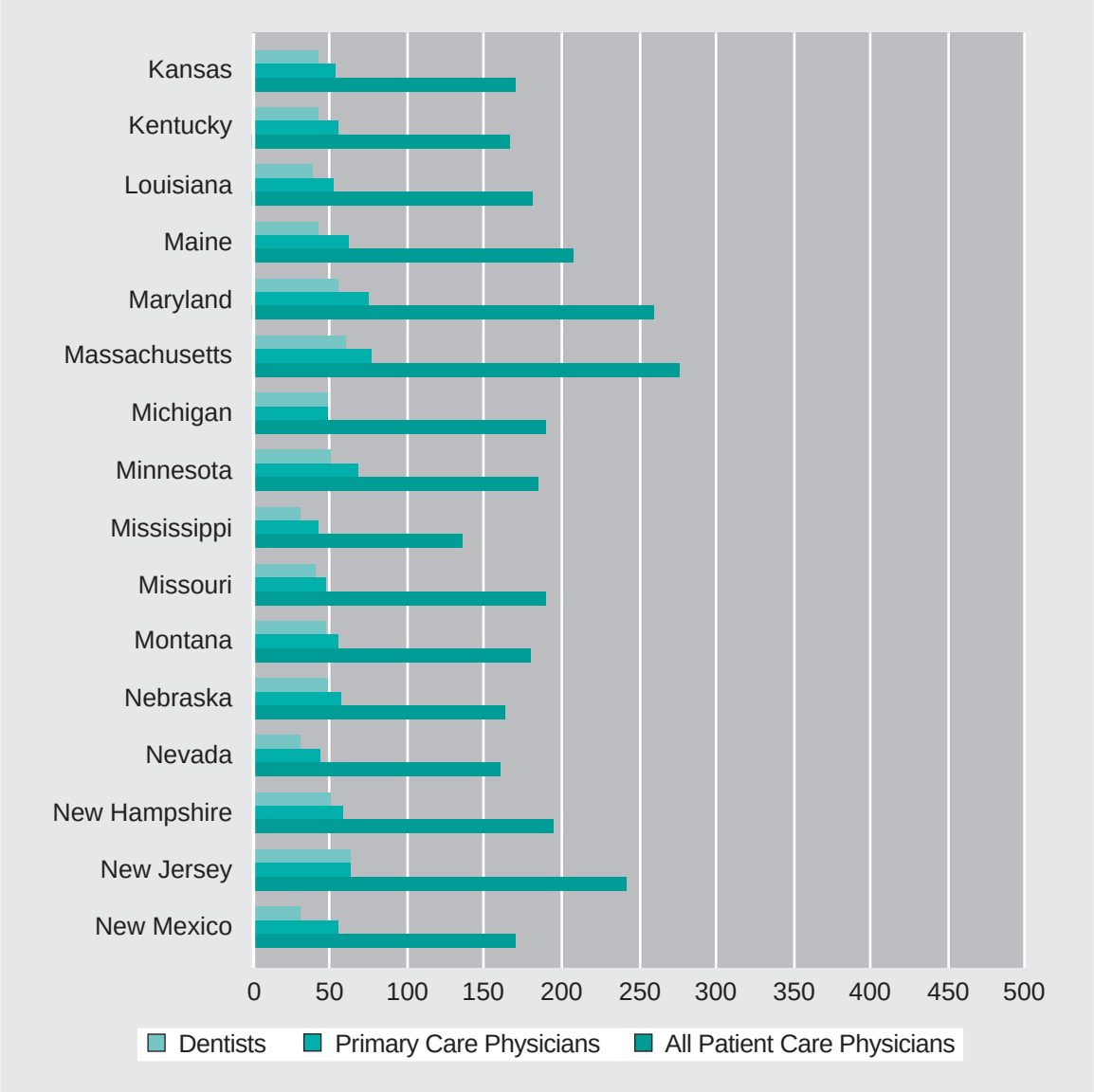
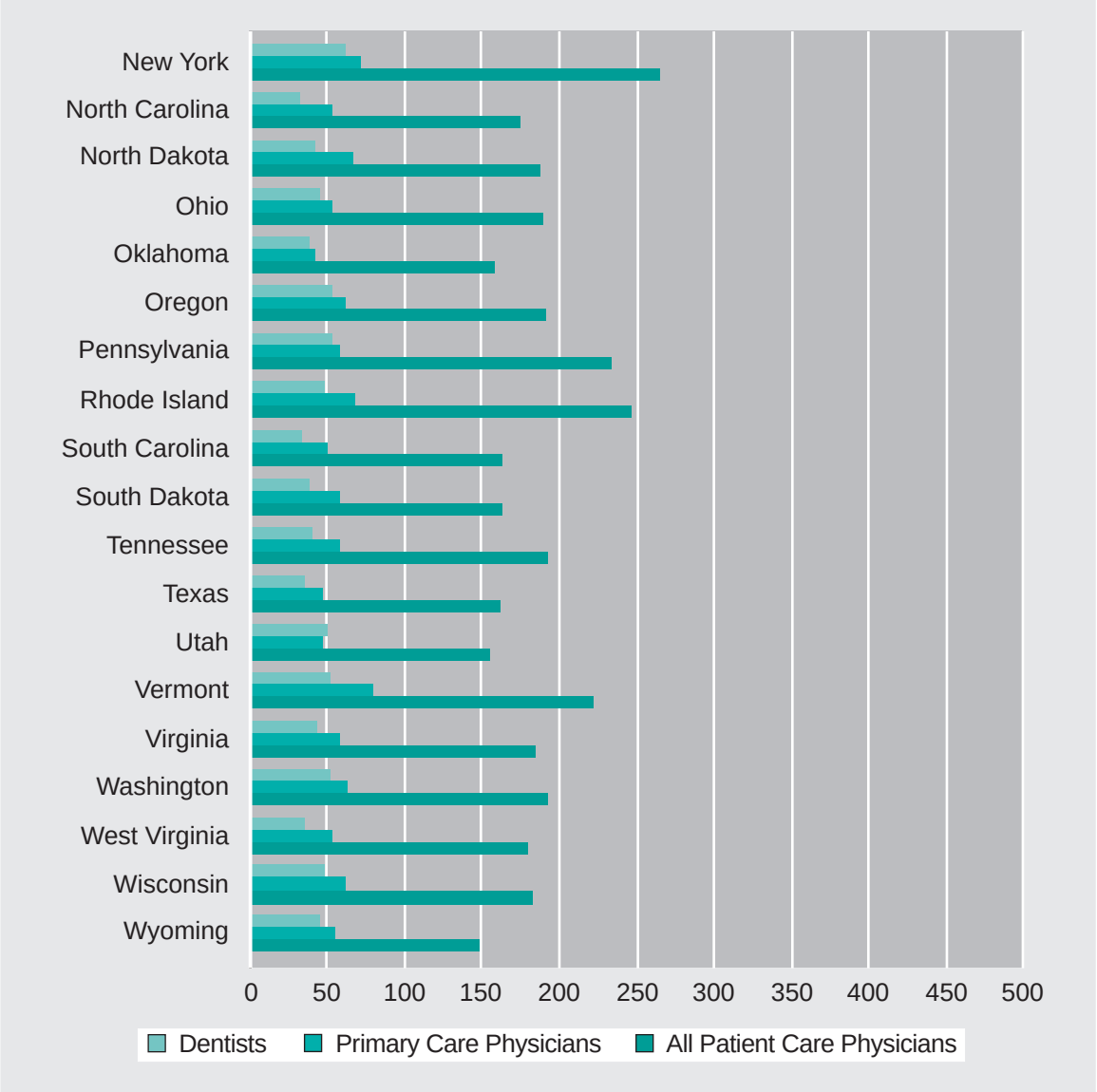
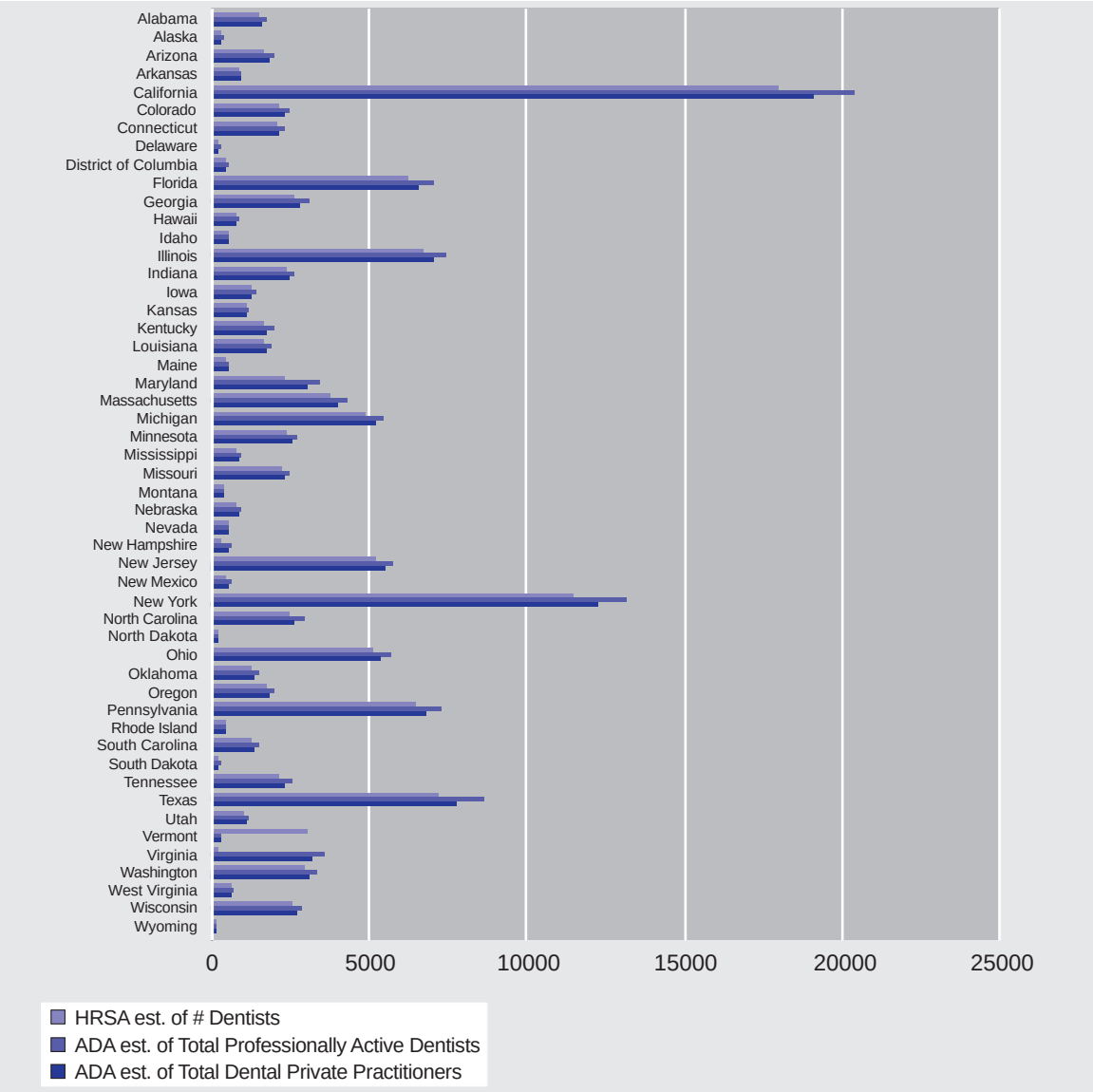


Figure 16.5.1. Number of dentists and physicians per 100,000 population in 1998 by state (continued)



Source: Dill M, Salsberg E, Wing P, et al. HRSA State Health Workforce Profiles. Rockville, MD: Bureau of Health Professions, National Center for Health Workforce Information & Analysis, Health Resources and Services Administration, DHHS, 2000.

Figure 16.5.2. Estimates of numbers of dentists by state



Note: Total private practitioners are active practitioners.

Sources: Dill M, Salsberg E, Wing P, et al. HRSA State Health Workforce Profiles 2000. Rockville, MD: Bureau of Health Professions, National Center for Health Workforce Information & Analysis, Health Resources and Services Administration, DHHS, 2000, and American Dental Association (ADA), Survey Center. Distribution of Dentists in the United States by Region and State, 1998. January, 2000. Materials used with permission of the American Dental Association.

16.6 Minority representation among dentists

A number of minority groups, including blacks and Hispanics, have historically been underrepresented in the dental professions. A 1992 report indicated that most female and minority dentists are under 40 years of age. In this age range about 20% of dentists were female, about 4.5% were black, 9.7% were Hispanic, and about 20% were Asian (Feinberg, 1992).

Areas of concern related to underrepresented minorities in the dental profession include negative racial/gender stereotypes, lack of opportunities for advancement, difficulties in startup practice arrangements, and absence of a meaningful mentoring and network system (Sinkford, 1992).

SOURCE OF DATA

Data shown here were obtained from the American Dental Association, Survey Center, 1997 report titled Distribution of Dentists in the United States by Region and State. These data are not available for 1998.

Most of the dentists surveyed were white. The percentages of black (2.0%) and Hispanic (3.5%) dentists were substantially below the representation of these groups in the general population. The percentage of Hispanics was determined independently of racial designations (Table 16.6.1).

Table 16.6.1. Race/ethnicity make-up of dentists in the United States (as summarized by the ADA between 1995 and 1997)

Race/Ethnicity	Percentage of Dentists (N)
White	91.0% (116,740)
Asian or Pacific Islander	5.8% (7,484)
Black	2.0% (2,505)
American Indian, Aleut, or Eskimo	0.2% (210)
Other	1.0% (1,284)
Total	100% (128,223)
Hispanic	3.5% (3,486)

Source: American Dental Association (ADA), Survey Center. Distribution of Dentists in the United States by Region and State. 1997. Materials used with permission of the American Dental Association.

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American Dental Association (ADA), Survey Center. Distribution of Dentists in the United States by Region and State. 1997.

Feinberg E. The changing face of dentistry. Texas Dental Journal 1992;25-7.

Sinkford JC. Issues and challenges facing the minority woman dentist. J Dent Educ 1992:56;561-5.

16.7 Proportion of dental degrees awarded to members of underrepresented racial and ethnic groups

Healthy People 2010 objectives include increasing the numbers of health professionals from underrepresented racial and ethnic groups as an integral part of addressing access to care issues. The proportion of female dental students rose from 2% in 1970 to 38% in 1990. Although minority dental school graduates as a whole increased from 7% in 1970 to 30% in 1990 (Feinberg, 1992), some racial and ethnic minorities remain severely underrepresented. For instance, blacks represented 5.7% of U.S. dental students in 1991-1992. Black dental graduates in 1991 represented 5.1% of all dental graduates. These percentages are far below the percentage of blacks in the general population (Sinkford, 1992).

SOURCES OF DATA

Analyses reported here are drawn from the American Dental Association (ADA) reports titled Survey of Predoctoral Dental Institutions, for dental school classes graduating in 1999 and 2000, and from the American Dental Education Association (ADEA) publication, "Survey of Dental School Seniors – 1999 Graduating Class." Data in the ADA reports are obtained from the dental schools while those in the ADEA report are obtained from the graduating students.

The ADA reports that 4,095 dental school students graduated in 1999 and 4,171 in 2000. Neither percentages for blacks (4.2% and 5.7%) or Hispanics (5.0% and 5.3%) varied greatly in this 2-year period (Table 16.7.1). The percentage of black graduates was similar to that in 1991.

There were few differences in post-dental school plans between men and women among 1999 dental school graduates. A higher percentage of blacks/African Americans planned on pursuing advanced education and a lower percentage intended to enter private practice, compared to other groups (Table 16.7.2).

REFERENCES

Feinberg E. The changing face of dentistry. Texas Dental Journal 1992:25-7.

Sinkford J. Issues and challenges facing the minority woman dentist. J Dent Educ 1992;56:561-5.

Table 16.7.1. Percent representation in the 1999 and 2000 U.S. dental school graduating class by selected characteristics

Characteristics	Percent (and Number) of Graduating Class	
	1999	2000
	N=4,095	N=4,171
Gender		
Female	35.3 (1,446)	39.5 (1647)
Male	64.7 (2,649)	60.5 (2,524)
Race/ethnicity		
White	64.9 (2,657)	62.2 (2,596)
Black	4.2 (174)	5.7 (239)
Hispanic	5.0 (204)	5.3 (220)
Native American	0.7 (27)	0.7 (31)
Asian	24.4 (999)	24.8 (1,034)
Not specified	0.8 (34)	1.2 (51)

Source: Survey of Predoctoral Dental Institutions, ADA, for graduating classes of 1999 and 2000. Materials used with permission of the American Dental Association.

Table 16.7.2. Plans following dental school graduation by race/ethnicity

Immediate Plans	Native American/ Alaska Native	Asian/ Pacific Islander	Black/ African American	Hispanic	White
Solo Private Practice	22.2%	4.8%	1.8%	4.9%	5.5%
Partnership/Group Private Practice	5.6%	14.7%	10.7%	15.5%	12.0%
Private Practice – Employed	16.7%	42.3%	26.8%	42.3%	33.3%
Private Practice Total	44.5%	61.8%	39.3%	62.7%	50.8%
Advanced Education	27.8%	29.1%	37.5%	34.5%	36.4%
Teaching, Research, or Administration	0.0%	2.1%	3.6%	1.4%	0.9%
Government Service	16.7%	8.8%	15.2%	7.7%	11.5%
Undecided	5.6%	2.7%	6.3%	3.5%	2.0%

Source: American Dental Education Association. Survey of Dental School Seniors–1999 Graduating Class. Used by permission of ADEA Publications. Materials used with permission of the American Dental Education Association.